



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8

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DEC 02 2011

Ref: 8EPR-N

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BLM Colorado State Office
2850 Youngfield Street
Lakewood, CO 80215

Jerome Thomas, Acting Regional Forester
USDA Forest Service, Rocky Mountain Region
740 Simms Street
Golden, CO 80401

Mark Stiles, San Juan National Forest Supervisor
San Juan Public Lands Center
15 Burnett Court
Durango, CO 81301

Re: Comments on the San Juan Public Lands Supplement
to the Draft Environmental Impact Statement and Rating of
the Draft Environmental Impact Statement
CEQ # 20110277 and 20070514

Dear Ms. Hankins, Mr. Thomas and Mr. Stiles:

In accordance with our responsibilities under Section 102(2)(C) of the National Environmental Policy Act (NEPA), 42 U.S.C. Section 4332(2)(C), and Section 309 of the Clean Air Act, 42 U.S.C. Section 7609, the U.S. Environmental Protection Agency Region 8 (EPA) has reviewed the Bureau of Land Management's (BLM) San Juan Public Lands Supplement to the Draft Land Management Plan and the Draft Environmental Impact Statement (Supplement).

Background and General Discussion

The EPA submitted its initial comments on the Draft Land Management Plan and the Draft Environmental Impact Statement (Draft LMP/EIS) to the BLM on June 17, 2008, but withheld our comments on the air quality analysis, and deferred the rating of the Draft LMP/EIS until completion of the Supplement.

During the public comment period for the Draft LMP/EIS, the San Juan Public Lands Center (SJPLC) received comments suggesting that the Reasonable Foreseeable Development (RFD) scenario included in the Draft LMP/EIS for oil and gas development projections in the Paradox Basin was low due to the

identification of a new high resource potential shale gas play underlying portions of Montezuma, Dolores and San Miguel counties. This potential gas play is known as the Gothic Shale Gas Play (GSGP). At that time, the SJPLC indicated their intent to prepare a Supplement to incorporate this new information into the Draft LMP/EIS. This Supplement analyzes the potential development of the GSGP based on this new information and discloses the updated results of the air quality modeling and associated impact analysis.

The Supplement considers and analyzes the air quality impacts associated with the inclusion of the GSGP development projections. The GSGP area (representing an approximate 24% increase in the original planning area) comprises 646,403 acres located within Montezuma, Dolores, La Plata and San Miguel counties and includes a mix of private, state and public lands. The Draft LMP/EIS described and analyzed four management alternatives for the area. This Supplement considers the same four alternatives. Alternative B, the preferred alternative, maintains most of the large, contiguous blocks of undeveloped lands while at the same time maintaining the diversity of uses and active forest and rangeland vegetation management. The inclusion of the GSGP development projections changes the development projections for each alternative. Specifically, it increases the number of wells, miles of roads and acres of surface disturbance.

EPA is pleased to see the inclusion of the air and water quality standards and guidelines that were developed for the project to minimize projected shale gas and other oil and gas development impacts on SJPL (listed on pages 2.7-9 in the Supplement). We support the inclusion of these measures, as well as others included below, which we believe are necessary to mitigate potential impacts associated with this Draft LMP/EIS.

EPA Comments and Recommendations

Our comments on the Supplement are as follows:

1. Emissions inventory

Section 4.1.2 of the revised AQTSD, Operational Field Equipment and Emissions, describes detailed assumptions used to develop the compression unit emissions for the Paradox Basin and Gothic Shale wells. However, we are unable to account for other production field emissions at well sites, such as heaters, combustor or flaring emissions. These emissions, when combined on a cumulative basis may be substantial so disclosure, at a minimum, is important.

Tables 4-5 and 4-6 in the revised AQTSD present construction emissions associated with GSGP well development activities. It is not clear to us what development assumptions and emissions factors were used to reach many of the emissions estimates in Tables 4-5 and 4-6. In particular, we are concerned that the drill rig engine, completion engine and flaring assumptions have not been identified. Section 3.2.1 of the revised AQTSD mentions that Tier 2 or 3 engines "would potentially impact all diesel-fired equipment to be used on the SJPLC lease areas", however it is unclear to us which engine type, drilling duration and emission factors were used for the emissions inventory. This information is necessary to evaluate both the emissions inventory size and accuracy, and to ensure all stakeholders, including operators, understand the underlying assumptions supporting the inventory.

To address our concerns raised by these ambiguities, EPA recommends SJPLC ensure that the

emission sources are fully accounted for and presented in the AQTSD. In addition, we also recommend that operating assumptions and emission factors used to support the emissions inventory for the drill rig and completion engines and flaring emission inventory be presented in the AQTSD. We also recommend that the assumptions used in developing the emissions inventory and subsequent modeling be presented in the Final EIS to ensure transparency and full disclosure.

2. Background Air Quality Data

Table S-3.1.1 in the Supplement provides a summary of existing air quality conditions near the project area. However, the summary does not include 1-hour NO₂ and 1-hour SO₂ data. We recommend adding this information to the table so that the document presents a full understanding of ambient air quality. This data can be obtained from Nancy Chick at the Colorado Department of Public Health and Environment (CDPHE) at (303) 692-3190.

3. Strategy for future ozone modeling

Page 3-7 of the Supplement states that monitored ozone concentrations in the project area are approaching the ambient 8-hour air quality standard of 75 ppb (Mesa Verde National Park). Since future oil and gas development in this region is difficult to predict, the document presents an ozone modeling strategy that details when future ozone modeling and impact analyses will occur. This strategy was developed by the SJPL Air Quality Impact Analysis Stakeholder Group (which included the EPA Region 8). Specifically, the document states that ozone modeling will be implemented once 210 wells have been permitted by the Colorado Oil and Gas Conservation Commission (COGCC) in the GSGP area. It also states that “the SJPLC will work closely with the operators and COGCC to track the number of gas shale permits, the success rates, and developable acreage” to identify when the 210 well threshold is reached. EPA supports this approach and recommends that the Final EIS include a summary of well development in the GSGP area to date and a prediction, based on the rate of existing development, about when the 210 well threshold may be met. Including this will disclose important temporal considerations so that plans can be made to conduct the air quality modeling such that it minimizes future well development delays.

4. NO₂ PSD results

Table S-3.1.9 of the Supplement presents both the direct and cumulative impacts on the NO₂ PSD increments at Class I and Class II areas. These cumulative impact predictions include an exceedance of the 1-hour NO₂ PSD increment at the nearby Mesa Verde National Park Class I area (predicted cumulative impact of 4.285 µg/m³ vs. the PSD Class I annual standard of 2.5 µg/m³). EPA recommends reducing the emissions of NO₂, an ozone precursor, through additional required NO_x emission reductions to mitigate the predicted exceedances. See comment #6 below for specific NO_x emission reduction recommendations.

5. Visibility impacts

According to Tables 7-56 (Method 2) and 7-58 (Method 6) in the revised AQTSD, up to 20 days of visibility impairment of greater than 10% could occur at Mesa Verde National Park due to the direct project emissions. Additionally, the analysis predicts that three Class 1 areas would experience visibility impacts above the 5% change AQRV threshold. These impacts included 29 days of 5% AQRV threshold at Mesa Verde National Park, 3 days at Canyonlands National Park and 1 day at Weminuche Wilderness. Canyons of the Ancients, a Class II area, had 40 days above the 5% AQRV threshold. EPA strongly recommends requiring further reductions of PM₁₀, PM_{2.5} and NO_x emissions to reduce these adverse impacts. See comment #6 below for specific additional mitigation

recommendations.

6. Air quality mitigation options

For oil and gas operations, NO₂ and visibility impacts have been shown to be caused primarily from NO_x emissions, and ozone is caused by both NO_x and VOC emissions (ozone precursors). Table S-3.1.33 in the Supplement presents several additional mitigation strategies, beyond those that were included in the Draft LMP/EIS that could be utilized to reduce project ozone precursor emissions. Given that monitored ozone concentrations in the project area (8-hr ozone concentration of 142 µg/m³, Table S-3.1.1) are approaching the ambient 8-hour air quality standard of 150 µg/m³, we recommend consideration of a more comprehensive menu of possible mitigation measures beyond those listed in the Supplement, including the following:

- Incorporate a centralized liquid gathering systems to reduce truck traffic and associated mobile source emissions, as well as traffic impacts to wildlife
- Incorporate Tier IV or better drill and completion rig engines to significantly reduce NO_x emissions
- Utilize low or no bleed pneumatic controllers and pumps to reduce VOC emissions
- Commit to green completions to reduce VOC emissions
- Incorporate vapor recovery units or combustors that meet 95% control efficiency for tank batteries, dehydrators and separators
- Install a plunger lift system on wells to significantly reducing VOC emissions associated with depressurization of production systems during a blowdown operation, when equipment is shut down for emergencies or scheduled maintenance
- Limit the number of drill rigs operating simultaneously.

Note: please also see Utah BLM's Greater Natural Buttes Supplement to the Draft Environmental Impact Statement for examples of applicant-committed mitigation measures.

7. Apparent Lack of Consistency between the Supplement and the AQTSD

The revised AQTSD describes two scenarios analyzed in the air quality assessment: Scenario 1 and Scenario 2. Scenario 1 represents leasing of additional public lands for oil and gas development with the maximum development of these lands. Scenario 2 represents the No Action Scenario, or no additional leasing of public lands. We assume that Scenario 1 relates to Alternative B, the Preferred Alternative, and Scenario 2 relates to Alternative A, the No Action Alternative. However, the use of two different naming conventions in the Supplement and the revised AQTSD may be a source of confusion to the reader. We recommend that the naming convention in the revised AQTSD be modified to be consistent with the Supplement.

EPA's Rating

Based on our review of the Draft LMP/EIS and the Supplement, the EPA is rating this Draft LMP/EIS as "Environmental Concerns – Insufficient Information" (EC-2). The "EC" rating means that EPA's review has identified potential impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts. The "2" rating means that the Draft LMP/EIS does not contain sufficient information for the EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment. The EPA's June 17, 2008, comment letter on the Draft LMP/EIS, as well as this comment letter on the Supplement, identified additional information that should be included

in the Final EIS. We have enclosed a copy of the June 17, 2008 comment letter and a description of the EPA's EIS rating system for your convenience.

We appreciate the opportunity to comment on this document and hope that our suggestions for improving it make sense. As has been the case in recent months, we would be happy to meet and discuss these comments and our suggested solutions anytime. If you have any questions or requests, please contact either me at 303-312-6925 or David Fronczak of my staff at 303-312-6096.

Sincerely,

A handwritten signature in black ink, appearing to read 'S. Bohan', with a long horizontal flourish extending to the right.

Suzanne J. Bohan
Director, NEPA Compliance and Review Program
Office of Ecosystems Protection and Remediation

Cc: Shannon Manfredi
Enclosures (2)

U.S. Environmental Protection Agency Rating System for Draft Environmental Impact Statements

Definitions and Follow-Up Action*

Environmental Impact of the Action

LO -- Lack of Objections: The Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC -- Environmental Concerns: The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO -- Environmental Objections: The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU -- Environmentally Unsatisfactory: The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 -- Adequate: EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 -- Insufficient Information: The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new, reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 -- Inadequate: EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.



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JUN 17 2008

Ref: EPR-N

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Rick Cables, Regional Forester
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740 Simms Street
Golden, CO 80401

Re: EPA comments on the San Juan
Public Lands Draft Land
Management Plan and
Environmental Impact Statement –
All resources except air quality
CEQ# 20070514

Dear Ms. Wisely and Mr. Cables,

The U.S. Environmental Protection Agency, Region 8 (EPA) has reviewed the Bureau of Land Management (BLM) and U.S. Forest Service (USFS) San Juan Public Lands Draft Land Management Plan and Environmental Impact Statement (Draft LMP/EIS). In accordance with our responsibilities under Section 102(2)(C) of the National Environmental Policy Act (NEPA), 42 U.S.C. Section 4332(2)(C), and EPA's authority under Section 309 of the Clean Air Act, 42 U.S.C. Section 7609, we offer the following comments.

The Draft LMP/EIS addresses future management options for approximately 1,867,800 acres of the San Juan National Forest, administered by the USFS, and approximately 500,000 surface acres and 300,000 acres of subsurface mineral estate administered by BLM. The planning area is located in southwestern Colorado, in Archuleta, Conejos, Dolores, Hinsdale, La Plata, Mineral, Montezuma, Montrose, Rio Grande, San Juan and San Miguel Counties. The BLM and the USFS in southwest Colorado are managed under a combined "Service First" partnership. The San Juan Public Lands Center (SJPLC) and its Ranger District/Field Offices (Columbine, Dolores and Pagosa) are the joint offices responsible for managing the public lands and resources in the DLMP/DEIS.

The Draft LMP/EIS describes four alternative land management plans. Alternative A, the No-Action Alternative, represents the continuation of current management direction. Alternative

B, the Preferred Alternative, which is described in detail in Volume 2 of the Draft LMP/EIS, provides a mix of multiple use activities, with a primary emphasis on maintaining most of the large, contiguous blocks of undeveloped lands and enhancing various forms of recreation opportunities while, at the same time, maintaining the diversity of uses and active forest and rangeland vegetation management. Alternative C provides a mix of multiple use activities, with a primary emphasis on preserving the undeveloped character of the San Juan public lands. Alternative D provides a mix of multiple use activities, with a primary emphasis on preserving the "working forest and rangelands" character of the lands administered by the SJPLC in order to produce the highest amounts of commodity goods and services.

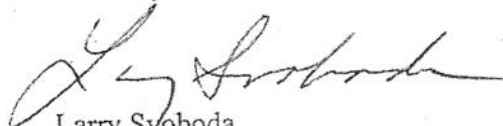
EPA understands that the USFS and BLM are updating the Reasonably Foreseeable Development for oil and gas development and planning to complete additional air quality analysis that will be released as a Supplemental DEIS. EPA is currently providing our comments on the Draft LMP/EIS with the exception of comments on the air quality analysis. EPA's comments on the air quality impacts from potential oil and gas development and on the more refined air quality analysis will be reserved until the USFS and BLM complete that analysis and release it for public comment. EPA will provide a rating of the overall Draft LMP/EIS at the time we provide our comments on the Supplemental DEIS.

In addition to air quality impacts, EPA has identified the following important issues which are included in our detailed comments: 1) impacts to water quality from oil and gas development; 2) impacts to impaired water bodies; 3) impacts to wetlands from livestock grazing and timber harvest; 4) groundwater pumping impacts to surface water quality; 5) impacts of the preferred alternative on special area designations and unique landscapes; and 6) impacts from recreation.

EPA supports the USFS and BLM's intention to do the CALPUFF analysis and believes that analysis is critical to understanding the environmental impacts of the proposed actions on the San Juan Public Lands. EPA Region 8 will work with your staff on a time frame provided by the USFS and BLM to expeditiously complete the additional analysis and provide that information to the public. I would like to thank Mark Stiles, Thurman Wilson, Shannon Manfredi and Gary Thrash for meeting with my staff in Durango and providing them with a thorough background on the preparation and contents of the Draft LMP/EIS and its appendices.

If you have any questions or would like to discuss our comments, please contact me at 303-312-6004 or Jody Ostendorf of my staff at 303-312-7814.

Sincerely,



Larry Svoboda
Director, NEPA Program
Office of Ecosystems Protection and Remediation

San Juan Public Lands Draft LMP/EIS
EPA's Detailed Comments (excluding air quality)

Water Quality Impacts

Section 401 of the Clean Water Act (CWA) requires certification by the appropriate governmental body that any activity covered by a federal license or permit, including, but not limited to the construction or operation of facilities which may result in any discharge into navigable waters, will comply with the applicable provisions of Section 301, 302, 303, 306 and 301 of the CWA (33 U.S.C. § 1341). EPA recommends that the Final LMP/EIS contain information regarding the applicability of CWA Section 401 to permitting and licensing activities in the planning area.

In addition, pursuant to CWA Section 301, point source discharges of pollutants into "waters of the United States" are prohibited except as in compliance with other specified sections of the CWA (33 U.S.C. § 1311). In most cases, such discharges must obtain a National Pollutant Discharge Elimination System (NPDES) permit from the appropriate governmental body (33 U.S.C. § 1342). EPA recommends that the Final LMP/EIS provide information regarding the CWA Section 402 permitting program and indicate that the Colorado Department of Public Health and Environment is generally the NPDES permitting agency for the planning area.

Water Quality Impacts Related to Oil and Gas Activities

Under the Preferred Alternative, most of the new wells (i.e., 130) would be drilled in the Paradox Basin on USFS lands, with the remainder occurring on USFS lands in the San Juan Sag area. Approximately 70 miles of new roads would be constructed in these two areas, both of which are substantially unleased at this time. EPA is concerned about the extent of the impacts to watersheds and water quality from new oil and gas leasing disclosed in the Draft LMP/EIS as described on Page 3.52, Volume I.

Among projected resource uses, Pages 3.57 and 3.58 of the Draft LMP/EIS also disclose that oil and gas development may have the greatest potential to adversely and cumulatively impact water resources due to construction and operation of new roads, well pads, pipelines, and compressor stations. Potentially significant impacts include direct impacts to surface seeps, springs, and streams and indirect impacts to riparian, wetland, wildlife, aquatic habitat, and source waters from dewatering of subsurface formations, erosion of saline soils, sediment transport, and disposal of poor quality produced water. Some of these impacts would be attributable to oil and gas development under new leases.

While EPA recognizes that these potentially significant impacts will not be precisely known until project-specific analysis is conducted, EPA is concerned that only four newly-leased wells would be stipulated with no surface occupancy (NSO) and seven with controlled surface use to mitigate water quality impacts (Page 3.338, Volume 1). Consequently, EPA recommends that the USFS and BLM consider additional application of NSO lease stipulations for wells in all

watersheds (with the possible exception of Disappointment Valley) in the Final LMP/EIS. NSO leasing would allow for later analysis at the project level to determine if site-specific impacts would require retaining NSO conditions or, if development with surface occupancy could occur without significant water quality and other (e.g., soil) impacts. EPA recommends application of NSO lease stipulations because if industry is able to complete development using directional and/or horizontal drilling, the USFS and BLM could attain the maximum recovery of the leased oil and gas reserve and provide additional protection of water and other important (e.g., visual) resources. In fact, the Draft LMP/EIS discloses that such technology has been shown to be technically feasible and economically viable in the Paradox Basin where most new leasing would occur (Pages 3.270-1, Volume 1).

EPA notes the Draft LMP/EIS indicates "almost all of" the produced water from coal bed methane (CBM) production in the San Juan basin is disposed of into deep aquifers of poor water quality (Page 3.49, Volume I). EPA recommends that the Final LMP/EIS include information regarding how the rest of the water is disposed of, and information regarding the disposal of produced water from any future CBM development in the planning area.

The Design Criteria on Page 251-2 of Volume 2 includes references to some water-related mitigation measures (e.g., "...road densities should not exceed two miles per square mile in any 6th level Hydrologic Unit Basin watershed on the SJPL"). However, most water quality-related measures appear to be contained in numerous "Additional Referenced Guidance" listed in this section. EPA recommends that the Final LMP/EIS incorporate specific mitigation measures from these guidance documents into the sections of Chapter 3 Volume 1 noted above, in the Design Criteria section, or as an Appendix.

Impaired Water Bodies

Table 3.3.1 identifies five waterbodies in the planning area that are classified as "Water Quality Impaired." McPhee Reservoir is impaired for mercury; the segment of Silver Creek above the Rico domestic water diversion is impaired for cadmium and zinc; Silver Creek is impaired for copper and zinc; and the lower Rio Blanco River is on the State 305(b) list for sediment. In addition, some rangelands in the western portions of the planning area have large areas of exposed marine-derived Lewis and Mancos shale. In those watersheds, salinity and delivery of salts to the Colorado River is of national concern (Page 3.40). As increased delivery of salinity and salts to the Colorado River is likely under all of the alternatives, EPA supports BLM's efforts to inventory, monitor and design erosion-control measures to reduce salt transport to the Colorado River as described on page 3.40. Furthermore, EPA encourages the agencies' use of best management practices to focus on improving water quality. We recommend that the Final LMP/EIS include a standard and/or objective in the Design Criteria (Volume 2) for waters not meeting the State's beneficial uses under existing conditions (i.e., the water is identified on the State's 303(d) list; included in the State's 305(b) report; or identified as not meeting the State's beneficial uses according to USFS and/or BLM protocols) that states that new land management activities must have a beneficial effect or no measurable adverse impact on aquatic habitat conditions.

EPA recommends that the Final LMP/EIS include more information on efforts to reduce or minimize pollutant loads and restore support for designated beneficial uses for the impaired waters. This is especially important because many watersheds in the planning area exhibit poor conditions (Page 3.51, Volume 1). EPA notes that the Design Criteria does not specify whether the proposed activities are consistent with pollutant load allocations or water quality targets established in TMDLs. We recommend that this information be included in the Final LMP/EIS. EPA supports maximizing annual treatments, as proposed under Alternatives C and D, to achieve watershed restoration.

Wetlands

Certain wetlands are subject to protection pursuant to the CWA and Executive Order 11990. Both the CWA and Executive Order 11990 provide a sequence for wetlands protection of avoidance, minimization of loss and mitigation. CWA Section 404 regulates discharge of dredged or fill material into "waters of the United States," including jurisdictional wetlands. Under CWA Section 404, permits for such discharges are generally issued by the U.S. Army Corps of Engineers, in accordance with EPA's CWA Section 404(b)(1) guidelines. These guidelines require, among other provisions, that no discharge of dredged or fill material shall be permitted unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem (40 CFR 230.10(d)). EPA recommends that the Final LMP/EIS explicitly state that any discharges of dredged or fill material associated with individual permits or leases may require a CWA 404 permit, which would include an additional full alternatives and impacts analysis. In addition, EPA notes Executive Order 11990 is not limited to wetlands regulated under the CWA but applies to all wetlands on federal lands and recommends the Final LMP/EIS include language on how Executive Order 11990 applies in the planning area.

The Draft LMP/EIS does not appear to provide information regarding the types of wetlands located in the planning area. EPA recommends a Final EIS include information on the various types of wetlands and suggests consulting the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory available on the Internet at www.fws.gov/nwi to obtain such information.

The Draft LMP/EIS describes impacts to riparian areas and wetland ecosystems from urbanization, agriculture, logging, livestock grazing, mining and recreation; road, dam and diversion construction; and the introduction of non-native species (Page 3.78, Volume 1). The impacts from cattle grazing are expected to continue to be a concern, and fen wetlands (fens) have been adversely impacted by management activities, especially road construction, road maintenance and off-road vehicles. Fens are a rare aquatic resource in Colorado. Wetlands comprise approximately 1-2 percent of the arid landscape in Colorado and fens occupy an extremely small percentage of this limited wetland resource. EPA supports Alternative C as the most protective of wetlands resources in terms of minimizing livestock grazing suitable acres and proposed acres for timber harvest. EPA notes that the Draft LMP/EIS states that minor impacts to wetlands and riparian areas from recreation occur only on a small percentage of the planning area. However, this appears to represent current use only. As demand for available recreation

settings is increasing (Page 3.392, Volume 1), EPA recommends that the Final LMP/EIS disclose the anticipated future recreation impacts to wetlands and riparian areas.

Groundwater

The Draft LMP/EIS states that direction for groundwater management was developed during the planning process for the Draft LMP/EIS because a comprehensive groundwater policy has not yet been adopted for USFS-administered lands (Page 3.49, Volume 1). As stated in the Draft LMP/EIS, there is growing recognition by land management agencies that large volumes of groundwater produced during fluid-minerals extraction could impact aquifers as well as the connected surface-water features. In the San Juan Basin, groundwater pumping from the Fruitland Formation has the potential to impact surface water quality. As the dewatering of the Fruitland Formation continues, there may be widespread reduction in water quantity to streams, springs, seeps and riparian areas and wetland ecosystem. The Draft LMP/EIS states that it could take several centuries to recharge this aquifer (Page 3.50, Volume 1). EPA believes this is an irretrievable loss of resources which appears to contradict the Desired Conditions for groundwater resources described in the Draft LMP/EIS that "aquifers maintain natural patterns of recharge and discharge," and "aquifers possessing groundwater of quality and/or quantity that provide multiple-use benefits, maintain water quality at natural conditions" (Page 23, Volume 2). The Final LMP/EIS should more fully explain whether and/or how each of the proposed actions will contribute to the dewatering of the Fruitland Formation.

In addition, EPA recommends that the Final LMP/EIS include information regarding regulation pursuant to the Safe Drinking Water Act, including information and regulation of public water supplies for communities within the planning area.

Areas of Critical Environmental Concern

Appendix U outlines the evaluation of 22 locations for consideration as Areas of Critical Environmental Concern (ACEC) as part of the San Juan Resource Management Plan (RMP) revision. Of those, only two locations are identified for further consideration as Potential ACECs, and only one, Big Gypsum ACEC, is included in the Preferred Alternative. EPA understands that the intent of Congress in mandating the designation of ACECs through the planning process is to give priority to the designation and protection of areas containing unique and significant resource values. EPA recommends that the Final LMP/EIS include more information to explain why the preferred alternative does not include the Mud Springs/Remnant Anasazi ACEC, which is proposed under Alternatives A and C, in the Preferred Alternative. In addition, please provide additional support for not including the Grassy Hills and Silveys Pocket Potential Conservation Areas, which are proposed under Alternative C, in the Preferred Alternative based on the important plant communities they contain.

Table U.1 reflects potential conservation areas (PCA) considered in the ACEC analysis by the Colorado Natural Heritage Program. Several PCAs appear to be rejected for consideration because the percentage of total acres on BLM-managed lands in the SJPA was less than 75 percent. This includes Disappointment Valley Northwest, which is described as having

“outstanding significance” and the San Miguel Basin, which includes Dry Creek Basin to recognize important Gunnison Sage Grouse habitat. Both areas have relatively high percentages of total acres on BLM managed lands – 65 percent and 57 percent respectively. EPA recommends that the Final LMP/EIS include more information on why those lands, which comprise over 37,000 acres, are not eligible for the additional protection of ACEC status. Please provide information supporting the 75 percent cut-off determination, and the rationale for not recommending these areas for ACEC protection given the environmental impacts to those areas’ outstanding resources.

Wild and Scenic Rivers

During the planning process, the SJPLC determined the appropriate development levels of rivers within the planning area, and Table 23 Volume 2 lists 27 river segments that the SJPLC found to be suitable for Wild and Scenic River (WSR) status. However, the Preferred Alternative only recommends 12 river segments, totaling 356 miles, for addition to the National WSR System (Page 2.33, Volume 1). In particular, EPA notes that the Outstandingly Remarkable Values (ORVs) of the West Dolores River have been protected for the past several decades under previous land management plans (Page 172, Volume 2). EPA is concerned that under the Preferred Alternative, the ORV of the West Dolores River – the highly specialized nesting habitat of the rare black swifts -- will not be adequately protected. EPA supports the approach of Alternative C, which proposes the listing of 24 suitable river segments for WSR status. In addition, EPA recommends including positive impacts (i.e., preserving such rivers in the free-flowing condition for the outstanding remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural and other similar values) resulting from designation as WSR. Finally, EPA requests that the Final LMP/EIS explain in greater detail how water resources development on WSRs will correlate with river miles found suitable as WSR, and why Alternatives B and C “have more potential for conflict” (Page 3.549, Volume I).

Wilderness Preservation

The Preferred Alternative would recommend a portion of the west side of the Hermosa Inventoried Roadless Area (IRA), portions of the Lizard Head IRA, portions of the Weminuche Adjacent IRA and portions of the Turkey Creek IRA for inclusion in the National Wilderness Preservation System. The DEIS states that nearly all of the other IRAs under this alternative would be managed as either Management Area (MA) 1s, 2s or 3s, to “retain their undeveloped character” (Page 2.33, Volume 1). The Preferred Alternative would have approximately 430,000 fewer acres where natural processes dominate (MA 1) than Alternative C, meaning those acres could experience impacts from limited management (MA 3), including salvage logging and its associated roads, fuels reduction, motorized equipment and recreation, and livestock grazing. EPA recommends that the Final LMP/EIS include more information to explain why all IRAs meeting the available and capable requirements for wilderness designation are not being recommended for inclusion in the National Wilderness Preservation System, as proposed in Alternative C. EPA recommends that the Final LMP/EIS thoroughly analyze the environmental impacts of not recommending all eligible wilderness areas for a management approach consistent with that designation.

Wilderness and Roadless Areas

Table 3.34.5 (Page 3.564, Volume 1) shows 113,286 acres in MA 1 under the Preferred Alternative, compared with 528,173 acres under Alternative C. Lands managed under MA 1 would best protect soils, water and air quality, wildlife, sensitive plants and other special features, while retaining wilderness and roadless characteristics. Specifically, IRAs under MA 1 exclude motorized and mechanized recreation, and are administratively unavailable for oil, gas and mineral development, and their associated impacts. EPA understands that the Draft LMP/EIS is consistent with Colorado's proposed Roadless Area Conservation Rule (RACR), for which an environmental impact statement is being prepared. EPA has previously expressed concerns, and continues to be concerned, that the RACR -- which would replace the recently reinstated USFS 2001 Roadless Rule -- could result in less protection of Colorado's roadless values and characteristics. Because the environmental impacts of the RACR have yet to be evaluated and disclosed to the public, EPA recommends that the Final LMP/EIS conform to the USFS 2001 Roadless Rule. Finally, the Draft LMP/EIS describes mitigation measures, as defined by 40 CFR 1508.20 (Page 3.6, Volume 1) which seem to direct the USFS and BLM to implement Alternative C, which recommends all IRAs for designation or Wilderness Areas, or as Wild and Scenic Rivers, or as Research Natural Areas.

Recreation

The Draft LMP/EIS notes that recreation is now the most extensive, and economically valuable, resource associated with the planning area. (Page 3.398, Volume 1) While EPA understands the perspective that recreation is a resource, we recommend that the Final LMP/EIS include discussion of the environmental impacts of recreation, particularly ATVs and snowmobiles, on natural resources such as water quality, wetlands and riparian areas, and wildlife habitat. As the SJPLC begins implementing its recreation facility master plan process to align recreation facility investments with benefits to visitors and revenues available, EPA would like assurance that decisions are based, at least in part, on reducing environmental impacts. We recommend that the Final LMP/EIS identify appropriate environmental protection measures related to recreational development, such as siting of any newly developed campground facilities and concentrated public recreational use areas away from ecologically sensitive areas, and providing adequate user education, signage and enforcement to protect those areas.

Heritage and Cultural Resources

Table 3.21.1, "Tribes and Pueblos with Cultural Ties or Interests in the Planning Area," includes 15 Pueblos, but does not include any of the Tribes. The Draft LMP/EIS indicates that consultation efforts with the Tribes and Pueblos are ongoing (Page 3.421, Volume 1). Given the large number of recorded heritage/cultural resources (nearly 5000), EPA recommends providing additional information in the Final LMP/EIS regarding the specific archaeological sites these groups are concerned about, and any progress towards formally establishing those sites as Traditional Cultural Properties.